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SAPC 1841
COPY 3 OF 2

March 21, 1956

Copy #3

PROGRESS REPORT NO. 8

As of this date, progress on the special project is considered to be very good. The aircraft has been flown to its design altitude, range, and structural limits a number of times, and on Saturday, 17 March, three flights were run with a duration of eight or more hours.

It appears that the operating problems of the J57-37 and -31 have been satisfactorily solved, with the possible exception of excessive oil leakage on some of the -37 engines. Eight aircraft have been delivered, with the ninth scheduled for delivery this month. Spares and ground handling equipment are concurrent and costs are in hand, as shown on the attached expenditure chart.

There is increasing evidence that the delivery schedule for subsequent airplanes can be improved slightly. The major existing problems at this date are connected with late delivery of GFE equipment, such as Package II, the APQ-56, etc. The modifications required to the aircraft to satisfy the operational commander have been agreed to and will be completed on four aircraft by 6 April. While every step is being taken to provide for field installations of late GFE, it is quite certain that, due to lack of knowledge of precise installation factors, certain problems will arise in the field. The contractor's crews required for the first contingent are sufficiently trained and ready to depart as scheduled. The recent requirement for three flight inspectors, who were not expected to be supplied, can be met.

The basic flight test program from this point forward consists of the following items:

1. Continuation of reliability tests on all aircraft, with particular reference to solving camera and other equipment problems.

2. Flight development of the periscopic sextant.

3. Improved fuselage augmentation by minor tailpipe outlet revision for better cooling of the engine compartment. This is satisfactory now, but some improvement is desirable and relatively easy to get.

4. Investigation of higher dash Mach number capability, including investigation of rudder buzz and any other phenomena which may be encountered.

5. Flight development of various packages, including Systems II, III, and [redacted]

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6. Derivation of low altitude range data for flight manual information.

7. Evaluation of JP-1 as a more available fuel.

8. Flight to 75,000 feet for determination of altitude limit of the -31 engine.

9. Final ARN-6 compensation.

10. Flight test of rear view mirror installation.

11. Tests of -37 engine oil system to reduce cockpit and equipment bay fogging problems.

12. Final tests on emergency landing parachute.

13. Determination of final weight and cg of a completely modified aircraft.

14. Completion of the flight test report and final handbook revisions.

Barring unforeseen difficulties, it appears that the program above could be completed by July or August 1956, exactly one year after the initial flight date.

Altitudes as high as 73,300 feet have been reached with the -31 engine and maximum range flights between 3800 and 4000 N.M. have been obtained. It appears that the -31 engine is slightly better than the -37, from all considerations. It also appears that the increase in aircraft weight, due to carrying additional equipment, batteries, etc., combined with an arbitrary sacrifice of fuel consumption from increasing the tailpipe diameter, has led to a reduction in range of somewhere between 4% and 5% from the optimum obtained in the earliest tests. Considering all factors, this is believed to be a worthwhile trade.

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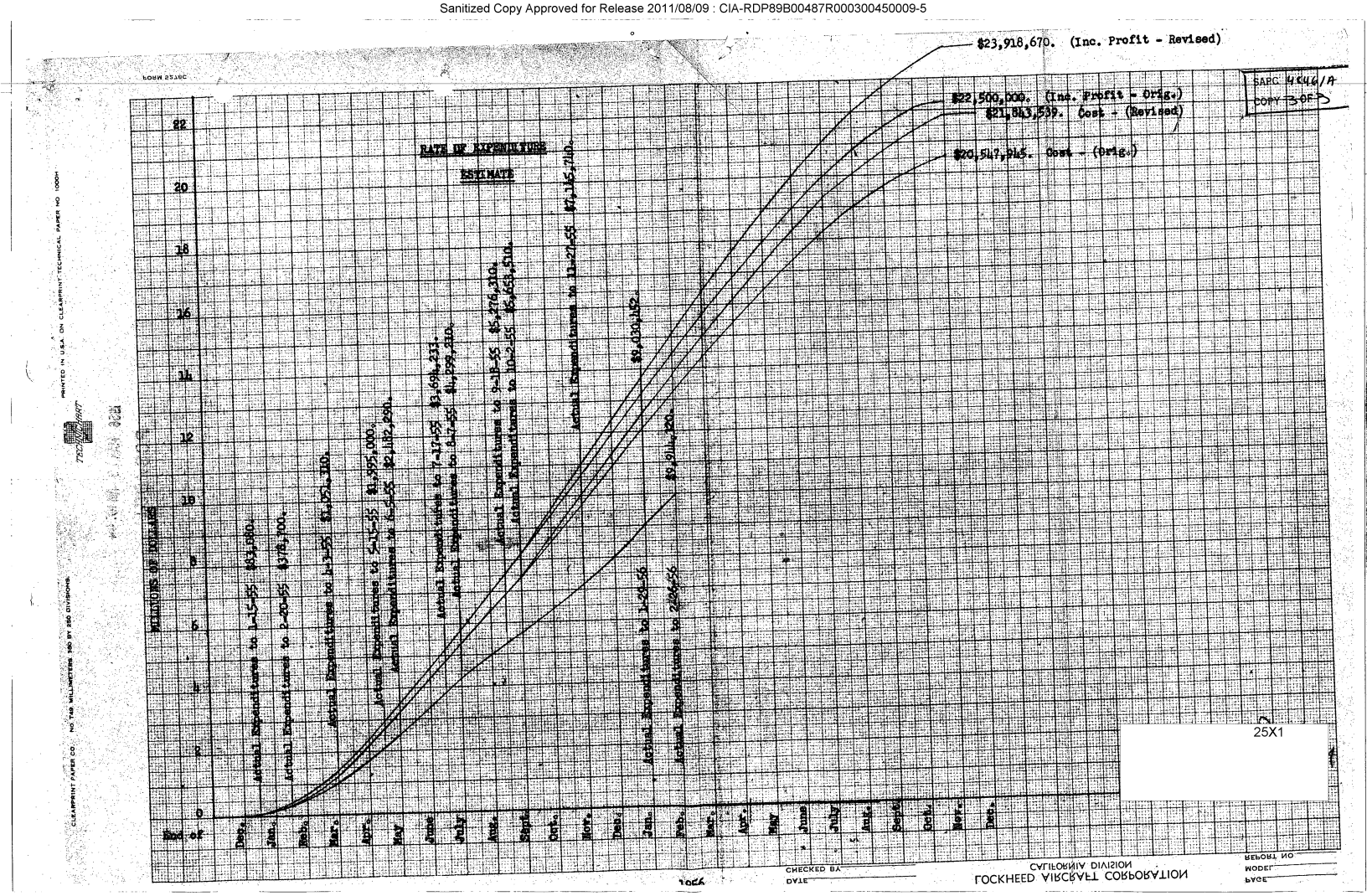

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